THE PLOUGH BOY.

BY HENRY HOMESPUN, JR.

"He that observeth the wind shall not sow; and he that regardeth the clouds shall not reap."—BUT—"He that tilleth his land shall have plenty of bread."—*Ecclesiastes.*

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ORIGINAL.

FOR THE PLOUGH BOY.

THE IDEA OF GOD AND A FUTURE STATE NOT NATURAL TO MAN, BUT TRADITIONAL.

POMPEII, a city at the foot of *Vesuvius*, which was destroyed about 70 years after the birth of our Saviour, by an eruption of that mountain, was covered with earth thrown from the volcanic crater to so great a depth that its scite was lost for many centuries. Upon uncovering its ruins within a few years, it has been found that the earth which had been projected into the air by the force of steam, or some other power in the crater, fell upon the city in such a manner as to bury the buildings, monuments, &c. without any concussion or violence; and that the sculptured marbles, and stucco ornaments, have remained to this day in a state of perfect preservation.

Among the statutes which have been recently recovered, there is one of JUPITER, which, from the style of its sculpture and other intrinsic peculiarities, is presumed to have been ancient when that city was buried. It is probably of Grecian sculpture, but of a period more remote than the *Hercules of Glycon*, the *Apollo of Belvidere*, or the *Venus of Medicis*. It is highly probable that at the time this statute was buried it was 1500 years old, and had been for centuries, a favorite idol of worship. To 1500 add 1749, the time which has elapsed since POMPEII was destroyed, and we have a period of 3249. How forcibly do such objects carry back the imagination to remote ages! The beholder views in this statute a landmark half way between the present moment and the period of the first creation of man. It is a record of the proficiency in art, and of the religious opinions of the age in which it was produced. A tradition had no doubt descended to that time, that AN INFINITE GOD had revealed himself to the first parents of mankind; that man had been created a living spirit, accountable for his actions, and entitled to endless existence; that the CREATOR claimed the worship of all rational creatures. Tradition had also informed them, that man fell from his original state of innocence; yet that the Creator had promised him salvation, through mediation and sacrifice; that the mediator should be sent npon the earth at some future time; and that faith in this promise should entitle the believer to his redemption. As a shadow of this great sacrifice, and as an evidence of the belief of the worshipper in the promise of his maker, mankind were commanded to offer sacrifices, and to prostrate themselves before the altar, with prayer, &c. Could ideas so simple and so dear to the heart of man, by any lapse of time or coincidence of circumstances, be forgotten? Unless parents, through successive generations, retained intelligence and thought enough to communicate these ideas to their offspring, they ceased to be human beings. These leading truths, when once communicated to the human understanding, we contend, could never have been lost. That there is a God; that the spirit of man is immortal; that there is to be a future state of rewards and punishments, are not facts self-evident to our feeble understandings, but were revealed to our first parents, and have descended by *tradition* to all the nations and families of the earth.

The clearness of revelation has indeed, been gradually rendered obscure and discrepant, by the fabrications and amplifications of profane poets. The first poets had distinct conceptions of the unity of Deity, and of the future destinies of man. The ideas on these subjects imputed to ORPHEUS had been worthy the pen of inspiration. The most ancient writers approach nearest to the sublime conceptions of scripture; but HOMER, HESIOD, and subsequent poets have converted the truths of revelation into the mere machinery of song.

The American savages know that the *Great Spirit* is the creator of heaven and earth; nor were they detached from the other families of mankind before the revelation had reached the heart of our lost race, that a redeemer was found. How else could they have conceived the use of sacrifice? If the belief in a future state and a knowledge of a God, be not natural to the human mind, its being universally found among savage as well as civilized men, should be received as a strong and unanswerable proof that there has been a revelation from heaven, and that all the tribes of men are derived from one stock, and have received their religious notions from one common source.

This *Statute of Jupiter* is certainly one third as old as the race of man. Familiarize the mind to this idea, and the ages that have passed away since the creation, seem amazingly diminished.—The imagination more easily conceives of the possibility of oral traditions having descended from Adam. If the works of man's hand have endured so long, cannot the impress of his maker, engraved upon his heart, have been perpetuated by his children? A.

FOR THE PLOUGH BOY.

Dear cousin Homespun,

You will much oblige your cousin, and indeed the whole family of our great-grandfather, Economy, by inserting in your paper the following improvement in domestic and rural economy: not barely for the benefit of our family, but in hopes that those who have long felt themselves above us, may be led to join in *our* plans for driving poverty and hard times, those pests whom we have introduced among ourselves by trying to be up with the biggest of them, from laying their hard hands on our once happy country.

The truth is, cousin Harry, we must once more throw off all the fine things we have adopted from those who despise us, and adopt the habits which were fashionable when our family was thought the first in the country, and the rules of Dr. Franklin, whom, you very well know, our great-grandfather adopted into his family, and made overseer of all his affairs.

It is but a little improvement that I would now propose, (for the old fashions of our ancestors must be recommended by your paper by degrees, as too great a zeal for our despised rules and fashions, would destroy your influence except immediately in our family,) and one which may easily be reconciled to the taste of other families, especially since bank speculation and East India goods have deprived them of the means of gratifying their disposition for 'far fetched and dear bought.' —The expense of shading our windows, since we have undertaken to build as big houses as the great folks, and must in imitation of their example, have muslin or some other dearer stuff for curtains, tipped off with net work and fringes, has taken many a day's hard work, ploughing and reaping, to pay—and is likely to take many more, for as soon as these curtains get hurt any way, they must be taken down, and new ones put up in their room. Now I am going to propose that when these old curtains must come down, instead of making new ones of such dear stuff, new ones made of *bull-rushes* may supply their place.—— [Give your big feeling readers a hint not to throw down the paper here in a moody fit.]——These will have many things in their favour the other never can be recommended by. They will give, besides, a green shade to the light, so beneficial to the eyes—keep folks from peeping in at the windows, and be handsome enough to gratify the humble pride of poverty : and all this at less expense than would make a fringe for an ordinary—hush—common window curtian. But one of the greatest advantages of this curtain is, that instead of hard digging in good land for them, they grow themselves, in land that cannot be used for grass, grain, or pasture. So every way they are better recommended to our family than the expensive fooleries which, introduced to us by the great ones, have kept us constantly digging for bread, when we might have lived like princes [not modern ones] if we had kept the counsels of our forefathers.

What set me principally to write this letter to you now, is, that your cousin LUCRETIA, my sister, is now weaving a piece of window curtains of this description, which have cost, besides about 30 threads of green woolen yarn, only half an hour to collect the rushes, and a day's work in weaving enough to blind four windows.

Wishing you every success, as the first of our family who has attempted to advocate our interests by placing our plans before the world, and giving our manners, customs, prudence, and temperance in their proper light, I bid you a hearty farewell for the present, with a hint that if other revivals of ancient simplicity come to my knowledge, I will not fail to let you know them.

DAVID W. HOMEWOVE.

N. B. The warp should be drawn into a common loom, four threads together, at the distance of three, or four, or even five inches apart. D.

FOR THE PLOUGH BOY.

Mr. HOMESPUN,

There is an old saying,("*Look before you leap*") that it is well worthy the attention of all classes of people at all times, but more particularly the present ; and many a one, by neglecting it, leaps into dangers and difficulties which they might avoid by looking well about them before they leap. I expect to make a leap shortly, but where it is to be, and what its object, I am now considering about. My employer, for whom I have worked several years, has lately discharged several of his workmen in consequence of his business falling off more than he anticipated. I expect my turn will come next, therefore, I wish to look about me a little before I am obliged to leap, and not be taken by surprise.

From what I can learn, there is no chance of getting employment in any of the sea ports at my business, and in all probability, to go south would be time and money spent in vain. I have been fortunate enough to save up a little money—perhaps enough to commence a small business with in this place, but the encouragement is so poor that I hardly dare venture it. There are already enough of the trade to do more business than is to be done in the city, and the auctions are crowded with goods that sell very low, which cuts the trade to pieces.

I have always felt an attachment to the country, and I think farming would best suit my views, —but then I am no farmer ; unfortunately I never turned my attention to agriculture ;—all I know is by having read a very few essays on farming, which I have accidentally seen in newspapers ; and since the Plough Boy first made his appearance, I have felt a strong desire to know something of agriculture, and a greater inclination for the country than I did before. It is said that " necessity is the mother of invention," and might not a mechanic through necessity become a farmer ? There are some mechanics who have turned farmers and have done extraordinary well by the change, but they have generally had some knowledge of the farmer's business. I think by industry and attention I might make a tolerable farmer, at any rate my feelings lean towards a country life at present.

I have always been pretty comfortably situated at my trade, and if I could have steady employ I think I should not quit it even for a farmer's life —but there can be no harm in looking out and preparing the way to make a good leap, if that should be my destiny, into some snug little place,

" Where av'rice ne'er intrudes to taint the mind ;
Where naught but virtuous love a home shall find ;
Where life in extacy shall glide away,
And close its scene as ends a Summer's day."

YOUNG HOWARD.

For the consolation of Young Howard, we mention, that an honest mechanic, who left this city several years ago, is now one of the best practical farmers in a neighbouring county. Farming like every other business, requires experience as well as industry, but we have no doubt that any young man, who possesses *a sound mind in a sound body*, may, by alternate study and labour, soon become a good farmer, both in theory and practice : And in the present state of our country ; a state from which we do not think she will very soon emerge into a better ; the life of a farmer will be found to possess advantages, which are every day diminishing in many other employments.

FOR THE PLOUGH BOY.

TO MATILDA.

It was with a great degree of satisfaction that I saw your communication in the last Plough Boy : With satisfaction—not that I was altogether satisfied with the argument advanced, but that a female should thus come forward, armed with every necessary qualification, to vindicate her sex from charges which she conceives to be " unjust and ungenerous in the extreme ;" and that her sex cannot now plead the want of a competent advocate, to defend them from every unjust imputation. Without attempting, or desiring, to excuse those whom you are pleased to term *gentlemen*, but who have more appropriately been denominated *dandies*, from the merited disgrace to which their evil habits subject them, I beg leave to coincide with those writers who, you say, " have even charged the ladies with being the cause of many serious evils."——And is it really your belief that the charge is unfounded ?—Pray in what nunnery, or in what heavenly little village have you been secluded, that you should have discovered nothing but the virtues of your sex ?—Methinks you have only beheld them in the mirror of your own mind, or you would have seen more of their frailties, and, no doubt, less of their excellence.

You cannot be insensible of the almost unbounded influence which the fair possess over the manners, and even opinions of the opposite sex ; Whether this is as it should be, perhaps I am not most competent to determine ; but certain it is, that the ladies *govern*, either by example or otherwise, in such *domestic* concerns, as the fashions or follies, and other modern refinements—This influence acknowledged, you will readily see the propriety of charging them with mal-administra-

tion, whenever their subjects deviate, with impunity, from a proper course in their domestic relations.

It is asserted and substantiated by every sensible writer, and admitted by every reflecting reader, whose opinion I have heard on this subject, that the principal *cause* of the "many serious evils" with which our country is at present afflicted, is EXTRAVAGANCE; and from the tenor of your article, I think I may safely rank you and your opinion with the above writers. Now *extravagance* is not only countenanced but cherished by *fashion*, and as you very justly remark—"whenever any thing becomes fashionable, no matter how absurd or ridiculous it appears at first, it is sson adopted by the greater part of community."

If no others are influenced with regard to dress by the females, certainly the *dandies* are—and from no other class of our sex is extravagance in dress to be apprehended. What incitement have these effeminate and contemptible beings to dress extravagantly, and what end have they in view, in this blind pursuit of folly? I answer emphatically—*female approbation*; which, I am sorry to add, they too abundantly receive, together with their versatile examples.

It is truly pleasing to hear the voice of beauty raised in defence of injured innocence; but when it is exerted in the cause of folly, to thwart the sage reasoning of experience, it must not be heard least it prove as dangerous as that of the *Syren!* Continue, then, to brand the follies and vices of men, with the ignominy they deserve; but stoop not to shield those of women from a like castigation. Undeserved censure, is never so hurtful as unmerited encomium; and a reproof, justly applied, will prove beneficial to all who are susceptible of virtue or capable of understanding.

LEANDER.

FOR THE PLOUGH BOY.

Fatting Cattle.

MR. HOMESPUN,

I have lately read an essay of Mr LANDON, of Connecticut, on what he deems the cheapest method of preparing cattle for the stall, the substance of which is here given.

In the winter of 1817 Mr. L. fatted an ox, and a heifer, in a way that he found cheaper than even common keeping. He fatted the heifer first. Her food for the purpose was chopped straw, scalded and seasoned with salt, to which was added a little meal of Indian corn and oats, and a small allowance of oil cake, or boiled flax-seed—the whole mixed up so as to form a mash. Of this about three pecks was given at a time. In fatting the heifer, she only eat about a bushel of boiled flax-seed. Some boiled hay was also give her. The ox was afterward fatted in pre-y much the same manner, as nearly as we are able to understand the report of the two cases; for Mr. L. appeaas to have been more of an adept in fatting, than in describing the manner with clearness and precision. According to his account, however, it appears that his profits in pursuing this mode was very uncommon, and he says that the fatting of these cattle afforded him more clear profit than he had derived from all the cattle he had ever before fatted. It would seem, indeed, that he considerably more than doubled the price of his cattle in fatting them, and that the expense of it was very inconsiderable.

This being the usual time for commencing the business of fatting for the winter store, I have thought proper to exhibit the plan of Mr. L. from a belief that it is excellently adapted for fatting cattle with the least expense. It will readily be perceived, however, that the fall pasture is calculated to obviate the expense of using boiled hay; but I have no doubt that when good hay is steam-boiled, which may be done with a little expense, it is just as nutritious for cattle as when in its green state.

A PLOUGH BOY.

FOR THE PLOUGH BOY.

Upland Marle.

Observing, in a late number of the Plough Boy, a short account of the valuable effects of this earth as a manure, when applied to the sandy lands of Middletown, New-Jersey, I have thought proper to offersome remarks on the subject of upland marle. Of the marle which frequently forms the substratum of bogs and swamps, it will be unnecessary to speak, as it is in bogs only that this marle isto be found, and its uses are better known; bu the upland marle is to be found in a variety of situations which require to be more particularly pinted out.

This sort of marle requently forms the substratum of a sandy soil sometimes of that which is clayey, and sometines of a gravelly or sandy loam. It is most commonly of a blueish color, and is usually supposedto be merely a blue clay. There is an immense mss of it lying underneath and in the rear of this city; it is also discovered at the rise of the hill, fom the city of Schenectady; near the village offHamilton, ten miles west of this it is also to be sen; so that it probably underlays most of the pine lands west of this place. There is a tract of pine land between Glen's Falls and Sandy Hill, that is most probably all underlaid with it as it is disclosed on its southerly side, and I beeve the same may be observed of the large tact of pine land that lies west of Glen's Falls, nd also of that lying north of Ballston Spring. I have indeed observed it in various parts of the country, and have no doubt it may be foun more abundantly than is commonly imagined. t has usually the appearance of clay, and of diffrent colours, though sometimes it may be foun of a sandy texture. It is principally the lim that is contained in marles that renders them luable as a manure, and the more they contain this, the greater is their efficacy as a fertilier of soils. Marles are readily discovered b dropping some sulphuric acid on them which mediately produces a fermentation, and the more violent this is, the more the marle is to be valued as a manure; while earths which are not marle, or have no lime or calcareous matter in them, are not affected by this acid.

In order to form a just estimate of what may be expected from the use of upland marle as a manure for light lands, it will be sufficient to mention a case stated by Arthur Young, Esq. of Great-Britain. He mentions a tract of poor sandy land of about 16 miles in length, lying between Holkam and Houghton, in G. Britain, which formerly was merely kept for sheep-walks: Some enterprising farmers, however, discovering that it was mostly bedded on a substratum of the blue colored marle, leased the land, and applied at the rate of 80 loads of this earth to the acre, which so fertilized the soil as to enable the lessees to make fortunes of the land before the expiration of their leases.

The most of the county of Norfolk, in England, was originally poor sandy lands; but with the aid of marle which abounds in most parts of it, together with the introduction of the turnip culture, it has become one of the most productive counties in that kingdom.

Where then, it may be asked, is the difficulty in reclaiming from sterility the large tract of land lying as far west of this city as Schenectady? It is believed that 60 tons of marle to the acre, would be found sufficient to render the better parts of those lands very valuable, and probably no part of them is more remote than five miles from places where abundance of marle can be had. The transporting of it on sleighs in the winter would be attended with no great expense—not, probably, to exceed $40 for every acre, even on lands the most remote from the beds of marle. The lands thus manured would be worth at least $100 an acre: as the turnip culture could then be very advantageously pursued on them, and no culture in this northern climate can be pursued to more advantage. The culture of the Swedish turnip, in particular, when cultivated in the manner recommended by Mr. COBBETT, and in a suitable soil, as the lands in question thus manured would be, will average a clear profit of $50 an acre.—There are probably of this tract, land sufficient to make 500 snug little farms, which, with the aid of this marle, might be redeemed from what is now almost a waste; for owing to the frequency with which fires may be expected to destroy the young growths of wood which may rise in the lands, all the advantages to be realized from them as a resource for fuel and timber, will probably be found of little account. Indeed, if the tract was cut up into farms, and 20 acres reserved for wood on each, more fuel and timber would probably thus be afforded than is now derived from the whole; for in that case the pieces of woodland would stand detached, so that fire getting into one would not affect another; and more pains would in that case be taken to preserve the growing wood, less would be wasted, and more valuable growths might be introduced. There is but little difficulty in introducing growths of locust in any uplands, and no timber is more valuable for fuel and various other uses, and scarcely any other is more rapid in its growth.

The county of Albany is much behind the other old counties in this state in regard to improvements; and yet I believe there is not a county in the state that has less lands which are incapable of being improved for valuable purposes.

A PLOUGH BOY.

Albany, September 2, 1819.

SELECTIONS.

Agricultural Chemistry, No. V.

BY HUMPHREY DAVY.

OF THE STRUCTURE OF PLANTS.

[50] Variety characterises the vegetable kingdom; yet there is an analogy between the forms and the functions of all the different classes of plants, and on this analogy the scientifict principles relating to their organization depend.

Vegetables are living structures distinguished from animals by exhibiting no signs of perception, or of voluntary motion; and their organs are either organs of nourishment or of reproduction; organs for the preservation and increase of the individual, or for the multiplication of the species.

In the living vegetable system there are to be considered, the exterior form, and the interior constitution.

Every plant, examined as to external structure, displays at least four systems of organs—or some analagous parts. First, the *Root*. Secondly, the [51] *Trunk ond Branches* or *Stem*. Thirdly, the *Leaves*; and fourthly, the *Flowers* or *Seeds*.

The *root* is that part of the vegetable which least impresses the eye; but it is absolutely necessary. It attaches the plant to the surface, is its organ of nourishment, and the apparatus by which it imbibes food from the soil. The roots of plants, in their anatomical divisions, are very similar to the trunk and branches. The root may indeed be said to be a continuation of the trunk terminating in minute ramifications and filaments, and not in leaves; and by burying the branches of certain trees in the soil, and elevating the roots in the atmosphere, there is, as it were, an inversion of the functions, the roots produce buds and leaves, and the branches shoot out into radical fibres and tubes. This experiment was made by Woodward on the willow, and has been repeated by a number of physiologists.

When the branch of the root of a tree is cut transversely, it usually exhibits three bodies: the bark, the wood, and the pith; and these again are individually susceptible of a new division.

OF THE EPIDERMIS.

The bark, when perfectly formed, is covered by a thin cuticle or *epidermis*, which may be easily separated. It is generally composed of a number of laminæ or scales, which in old trees are usually in a loose decaying state. The epidermis is not vascular, and it merely defends the interior parts from injury. In forest trees, and of strong texture, it is a part of little importance: but in the reeds, the grasses, canes, and [52] the plants having hollow stalks, it is of great use, and is exceedingly strong, and in the microscope seems composed of a kind of glassy net-work, which is principally siliceous earth.

This is the case in wheat, in the oat, in different species of equisetum, and above all, in the rattan, the epidermis of which contains a sufficient quantity of flint to give light when struck by steel; or two pieces rubbed together produce sparks. This fact first occurred to me in 1798, and it led to experiments, by which I ascertained that siliceous earth existed generally in the epidermis of the hollow plants.

The siliceous epidermis serves as a support, protects the bark from the action of insects, and seems to perform a part in the economy of these feeling vegetable tribes, similar to that performed in the animal kingdom by the shell of the crustaceous insects.

OF THE PARENCHYMA, AND CORTICAL LAYERS.

Immediately beneath the epidermis is the *parenthyma*. It is a soft substance consisting of cells filled with fluid, having almost always a greenish tint. The cells in the parenchymatous part, when examined by the microscope, appear hexagonal. This form, indeed, is that usually affected by the cellular membranes in vegetables, and it seems to be the result of the general re-action of the solid parts, similar to that which takes place in the honey comb. This arrangement, which has usually been ascribed to the skill and artifice of the bee, seems, as Dr. Wollaston has observed, to be merely the result of the mechanical laws which influence the pressure of cylinders composed of soft materials, the nest of solitary bees being uniformly circular.

[53] The innermost part of the bark is constituted by the *cortical layers*, and their numbers vary with the age of the tree. On cutting the bark of a tree of several years standing, the productions of different periods may be distinctly seen, though the layer of every particular year can seldom be accurately defined.

The cortical layers are composed of fibrous parts which appear intervoven, and which are transverse and longitudinal. The transverse are membranous and porous, and the longitudinal are generaly composed of tubes.

The functions of the parenchymatous and cortical parts of the bark are of great importance.—The tubes of the fibrous parts appear to be the organs that receive the sap; the cells seem destined for the elaboration of its parts, and for the exposure of them to the acton of the atmosphere, and the new matter is annually produced in the spring, immediately on the inner surface of the cortical layer of the last year.

It has been shewn by the experiments of Mr. Knight, and those made by other physiologists, that the sap descending though the bark after being modified in the leaves, is the principal cause of the growth of the tree; thus, if the bark is wounded, the principal formation of new bark is on the upper edge of the wound; and when the wood has been removed, the formation of new wood takes place immediately beneath the bark: yet it would appear from the late observations of M. Palisot de Beauvois, that the sap may be transferred to the bark, so as to exert its nutritive functions, independent of any general system of [54] circulation. That gentleman separated different portions of bark from the rest of the bark in several trees, and found that in most instances the separated bark grew in the same manner as the bark in its natural state. The experiment was tried with most success on the lime-tree, the maple and the lilac; the layers of bark were removed in August, 1810, and in the spring of the next year, in the case of the maple and the lilac, small annual shoots were produced in the parts where the bark was insulated.

OF THE WOOD.

The wood of trees is composed of an external or living part, called *alburnam* or *sap-wood*, and of an internal and dead part, the *heart-wood*.—The alburnum is white, and full of moisture, and in young trees and annual shoots it reaches even to the pith. The alburnum is the great vascular system of the vegetable through which the sap rises, and the vessels in it extend from the leaves to the minutest filaments in the roots.

There is in the alburnum a membranous substance composed of *cells*, which are constantly filled with the sap of the plant, and there are in the vascular system several different kinds of *tubes*; Mirbel has distinguished four species, the *simple tubes*, the *porous tubes*, the *trachæ*, and the *false trachæ*.

[55] The porous tubes likewise contain these fluids; and their use is probably that of conveying them into the sap for the production of new arrangements.

The trachæ contain fluid matter, which is always thin, watery, and pellucid, and these organs, as well as the false trachæ, probably carry off water from the denser juices, which are thus enabled to consolidate for the production of new wood.

In the arrangement of the fibres of the wood, there are two distinct appearances. There are series of white and shining laminæ which shoot from the centre towards the circumference, and these constitute what is called the *silver grain* of the wood.

There are likewise numerous series of concentric layers which are usually called the *spurious grain*, and their number denotes the age of the tree.

The silver grain is elastic and contractile, and it has been supposed by Mr. Knight, that the change of volume produced in it by change of temperature, is one of the principal causes of the ascent of the sap. The fibres of it seem always to expand in the morning, and contract at night; and the ascent of the juices, as was stated in the last lecture, depends principally on the agency of heat.

The silver grain is most distinct in forest trees; but even annual shrubs have a system of fibres similar to it. The analogy of nature is constant and uniform, and, similar effects are usually produced by similar organs.

FROM THE ALBANY ARGUS.

Treatise on Agriculture.

SECTION III.

Theory of vegetation.

[CONCLUDED.]

3d. Of *air* and its agency in vegetation:

A seed deprived of air will not germinate; and a plant placed under an exhausted receiver, will soon perish. Even in a close and badly ventilated garden, vegetables indicate their situation; they are sickly in appearance, and vapid in taste. These facts sufficiently shew the general utility of air to vegetation: but this *air* is not now the simple and elementary body, that the ancient chymists describe it to be. Priestly first,(1) and Lavoisier after him, analysed it, and found, that when pure, it consisted of about 70 parts of azote, 27 of oxygen, and 2 of carbonic acid. In its ordinary (or impure) state, it is loaded with foreign

(1) See Priestly's Experiments and Observations on different kinds of Air, begun in 1767.

and light bodies; such as mineral, animal and vegetable vapors, the seeds of plants and the eggs of insects, &c. Is it to this *aggregate*, that vegetation owes the service rendered to it by air? And if not, to *how many*, and to *which*, of its regular constituents, are we to ascribe them? This enquiry will form the subject of the present article.

All vegetables in a state of decomposition, give *azote*; and some of them[cabbages, radishes, &c.] give it in great quantity. This abundance, combined with the fact, that vegetation is always vigorous in the neighborhood of dead animal matter, led to the opinion, that azote contributed largely to the growth of plants; but experiments, more exactly made and often repeated, disprove this opinion, and shew that in any quantity it is unnecessary, and that in a certain proportion it is fatal to vegetation.

In *hydrogen gas*, plants are found to be variously affected, according to their local situation; if inhabitants of mountains, they soon perish—if of plains, they shew a constant debility—but if of marshy grounds, their growth is not impeded.

Carbonic acid is formed and given out during the process of fermentation, petrefaction, respiration, &c. and makes 28 parts out of 100 of atmospheric air. It is composed (according to Davy) of oxygen and carbon, in the proportion of 34 of the former to 13 of the latter. It combines freely with many different bodies; animals and vegetables are almost entirely composed of it; for the *coal* which they give, on combustion, is but *carbon* united to a little oxygen, &c Priestly was the first to discover, that plants *absorbed carbonic acid*; and Ingenhouse, Sennebier and De Saussure have proved, that *it* is their *principal aliment*. Indeed the great consumption made of it, cannot be explained by any natural process, excepting that of vegetation. On this head, we cannot do better than digest the experiments of those chymists into a few distinct propositions.(2)

1. In pure carbonic acid gas, seeds will swell, but not germinate. 2. United with water, this gas hastens vegetation. 3. Air containing more than one twelfth part of its volume of carbonic acid, is more favorable to vegetation. 4. Turf, or other carbonaceous earth, which contains much carbonic acid, is unfavorable to vegetation until it has been exposed to the action of atmospheric air, or of lime, &c. 5. If slacked lime be applied to a plant, its growth will be impaired, until the lime shall have recovered the carbonic acid it lost by calcination. 6. Plants kept in an artificial atmosphere and charged with carbonic acid, yield on combustion, more of that acid than plants of the same kind and weight growing in atmospheric air. 7. When plants are exposed to air and sunshine, the carbonic acid of the atmosphere is consumed, and a portion of oxygen left in its place. If few supplies of carbonic acid be given to the air, the same result follows; whence it has been concluded, that air furnishes carbonic acid to the plant, and the plant furnishes oxygen to the air. This double function of absorption and respiration, is performed by the green leaves of plants (3) 8. Carbon is to vegetation, what oxygen is to animal life; it gives support by purifying the liquids and rendering the solids more compact.

[2] Recherches chemiques sur la vegetation, chap ii.
[3] This was a discovery of Sennebier.

4th. Of *light*, *heat*, and *electricity*, and their agency in vegetation:

When deprived of light, plants are pale, lax and dropsical; restored to it, they recover their colour, consistency and odour. If a plant be placed in a cellar, into which is admitted a small portion of light through a window or cranny, thither the plant directs its growth, and even acquires an unnatural length in its attempt to reach it.(4) These facts admitted, no one can doubt the agency of light in vegetation; but in relation to this agency, various opinions exist; one, that light enters vegetable matter and combines with it: another, that it makes no part either of the vegetable or of its aliment, but directly influences substances which are alimentary;(5) and a third that besides the last effect, it stimulates the organs of plants to the exercise of their natural functions.(6)

Without doing more than state these opinions, we proceed to offer the results of many experiments on this subject. 1st. That *in the dark*, no oxygen is produced, nor any carbonic acid absorbed; on the contrary, oxygen is absorbed and carbonic acid produced. 2d That plants exposed to *light*, produce oxygen gas in water. 3d That *light* is essential to vegetable transpiration; as this process never takes place during the *night*, but is copious during the *day*; and 4th That plants raised *in the dark*, abound in watery and saccharine juices—but are deficient in woody fibre, oil and resins; whence it is concluded, that saccharine compounds are formed in the *night*, and oil, resins, &c. in the *day*.

When the weather is at or below the freezing point, the sap of plants remains suspended and hardened in the alburnum;(7) but on the application of *heat*, whether naturally or artificially excited, this sap is rendered fluid, is put into motion and the buds begin to swell. Under the same impulse, through the medium of the earth, the roots open their pores, receive nutritive juices, and carry them to the heart of the plant. The leaves being now developed, begin and continue the exercise of their functions, till winter again, in the economy of nature, suspends the operations of the machine. Nor is its action confined to the circulation of vegetable juices. Without vapour (its legitimate offspring) the fountain and the shower would be unknown—nor would the great processes of animal and vegetable fermentation and decomposition go on. Without rain or other means ameliorating the soil, what would be the aspect of the globe? what the state of vegetation? what the situation of man?

The diffusion of *electrical* matter, found in the air and in all other substances, furnishes a presumption, that it is an efficient agent in vegetation. Nollet and others have thought, that artificially employed, it favored the germination of seeds and the growth of plants; and Mr. Davy "found, that corn sprouted more rapidly in water, *positively* electrified by the voltaic battery, than in water *negatively* electrified."(8) These opinions have not escaped contradiction, and *we* do not profess to decide where doctors disagree.

[4] It is by a knowledge of this fact, that gardeners bleach chicony and cellery, &c.
[5] See Fourcroy, vol. viii.
[6] See Chaptal on vegetation.
[7] Knight's Observations, &c.
[8] Davy's Elements.

5th. Of *stable yard manures*, *lime*, *marl* and *gypsum*, and their agency in vegetation:

We have already said, that vegetables in the last stage of decomposition, yield a black or brown powder, which Mr. Davy calls "*a peculiar extractive matter, of fertilizing quality*," and which the chemists of France have denominated *terreau*. This vegetable residuum is the simple mean employed by nature to re-establish that principle of fertility in the soil, which the wants of man and other animals are constantly drawing from it. It was first analysed by Hassenfratz, who found it to contain an oily, extractive and carbonaceous matter, charged with hydrogene; the acetates and benzoates of potash, lime and ammoniac; the sulphates and muriates of potash and a soupy substance, previously noticed by Bergman. Among other properties (and which shows its combustible character) is that of absorbing, from atmospheric air, its oxygen, and leaving it only azote. This was discovered by Ingenhouse, who, with De Saussure and Braconnet, pursued the subject by many new and interesting experiments, the result of which is—

1. That the oxygen thus absorbed, deprives the terreau of part of its carbon, which it renders soluble and converts into mucilage; and

2. That the carbonic acid, formed in the process, combines with the mucillage, and with it is absorbed by the roots of plants.

If we put a plant and a quantity of slacked lime under the same receiver, the plant will perish; because the lime will take from the atmospheric air all the carbonic acid it contains, and thus *starve* the plant. Vegetables placed near heaps of lime in the open air, suffer from the same cause and the same way; but though lime in *large* quantities, destroys vegetation, in *small* quantities it renders vegetation more vigorous. Its action is of two kinds—mechanical and chymical; the first is a mere division of the soil by an interposition between its parts; the second, the faculty of rendering soluble vegetable matter, and reducing it to the condition of terreau.

The *mechanical* agency ascribed to lime, belongs also to *marle* and to *ashes*, and in an equal degree—but their *chymical* operation, though similar, is less.(9)

Gypsum is composed of lime and sulphuric acid. Mayer was the first to present to the public a series of experiments upon it, in its relation to agriculture. Many chymists have followed him, and a great variety of opinion yet exists with regard to its mode of operation. Yvart thinks that the action of gypsum is exclusively the effect of the sulphuric acid, which enters into its composition; and founds this opinion upon the fact, that the ashes of turf, which contain sulphate of iron and sulphate of alumina, have the same action upon vegetation as gypsum. Laysteric observing that plants, whose roots were nearest the surface of the soil, were most acted upon by plaster, concludes, that gypsum takes from the atmosphere the elements of vegetable life and transmits them directly to plants. Bosse intimates, that the *sceptic* quality of gypsum (which he takes for granted) best explains its action on vegetation: but this opinion is subverted by the experiments of Mr. Davy—who found, that of two parcels of minced

[9] Vegetable ashes are *lime*, combined with an earthy saline matter.

veal, the one mixed with gypsum, the other left by itself, and both exposed to the action of the sun, the *latter* was the first to exhibit symptoms of putrefaction. Mr. Davy's own belief on this subject is, that it makes part of the food of vegetables, is received into the plant and combined with it. The last opinion we shall offer on this head, is that of the celebrated Chaptal. "Of all substances, gypsum is that of whose action we know the least. The prodigious effect it has on the whole race of trefoils (clover, &c.) cannot be explained by any *mechanical* agency—the quantity applied being so small—or by any *stimulating* power—since gypsum, raw or roasted, has nearly the same effect; nor by any *absorbent* quality, as it only acts when applied to the leaves. If permitted to conjecture its mode of operation, we should say, that its effect being greatest when applied to the *wet* leaves of vegetables, it may have the faculty of absorbing and giving out water and carbonic acid, little by little, to the growing plant. It may also be considered as an *aliment in itself*— an idea much supported by Mr. Davy's experiments, which shew, that the ashes of clover yield gypsum, though the clover be raised on soils not naturally containing that substance."

[TO BE CONTINUED.]

ALBANY:

SATURDAY, SEPTEMBER 11, 1819.

Perpetual Motion.

NEW-LEBANON, Sept. 2.

Mr. HOMESPUN,

SIR—The editor of the New-York Advertiser, in his paper of the 27th ult. notices a machine having been exhibited in New-York, and invented by a Mr. FOSTER, of Owego, which, he says, "*apparently* possesses self-moving powers," and which he deems "extremely well worthy the public attention." A model of the same machine was exhibited at this place for some time by Mr. Foster himself, who left here on Sunday morning last, with it for Albany. All who have examined it concur with the editor of the Advertiser in the opinion that it is worthy of public attention, although few are willing to give up their former opinions relative to the principles of mechanics and the laws of gravitation.

Would you not be conferring a great benefit upon the public, by exciting some of your most scientific men to an examination of it and publishing, for the benefit of the Plough Boys, the result. ANTI-IMPOSITION.

SUGGESTED—The machine is apparently operated upon by nine leaden balls. If they are removed from the wheels, the machine will still continue its motion, if operated by some secret spring or weight.

REMARKS.

The information of Mr. FOSTER'S machine, in our last, was furnished by a gentleman of mechanical skill and ingenuity; a scholar and a man of science. He is fully impressed with the belief that there is no deception; and that Mr. FOSTER has at last found that which may be considered equal to the *Philosopher's stone*; and which has so long puzzled the *Philosophers* of ancient and modern times. We hope it may be so; and that Mr. FOSTER may reap that harvest of profit, as well as Fame, to which, if our informant of last week, be correct; he is justly entitled.

Weekly Summary.

A pamphlet is in circulation urging the propriety of abolishing the council of appointment in this state, and for substituting a different mode of making appointments.—Another pamphlet is announced, shewing the superior advantages of flat fire proof roofs to our buildings, instead of roofs of the present construction.

An essay has lately been published in New-York on the necessity of *improving our national forces*, by a gentleman of the name of W. T. W. Tone, the object of which is to impress a belief that this country is the subject of jealousy and enmity on the other side of the Atlantic, and that an attempt of a very formidable nature may yet be made to crush the spirit and principles of liberty in this country. It is believed that the pamphlet is well worthy of the attentive perusal of every man in this country To prepare for the worst is the surest means of averting uncommon calamity.

Yellow Fever.—Some cases of this still occur in Charleston and Baltimore, some few in Boston, and very lately some have occurred in New-York. The season, however, is probably too far advanced to excite any serious apprehensions of its becoming very prevalent in any of those places.

The Northern Canal is progressing expeditiously. The locks at Whitehall and Fort Edward are not exceeded in strength or durability by any in Europe.

In New-York, Zinc has lately been tried as a covering for houses, and is preferred to slate, as being cheaper and more durable.

The medium heat, in New-York, in the months of July and till the 16th August, in each of the 4 years past, has been as follows—in 1816, 74 degrees—1817, 76—1818, 79—1819, 81.

During the week ending on the 21st ult. 104 deaths occurred in Philadelphia and the liberties, and more than half of the number were of children under 2 years—24 of these of the cholera morbus—9 of the hooping cough.

The following cure for the cholera morbus is so well authenticated, from different publications, of its speedy and effectual operation in affording relief, that we hasten to give it further publicity Take a cork, and burn it *thoroughly* in a fire; when it ceases to blaze mix it upon a plate with a little milk and water, or any thing more agreeable, give it to the patient, and repeat the dose till the disorder ceases, which it commonly does in the administration of the second or third dose. Sometimes one dose is found sufficient. It immediately corrects the acidity of the stomach, which is the principal cause of the disorder.

The two wings of the Capitol, at Washington, are in such forwardness, that they will be ready for the reception of congress, at their next meeting, and considerable progress has been made in the main building.

Antiquities of Marietta.—In levelling a street in that town an ancient mound was levelled, when the remains of a human skeleton were discovered, and what appeared to have been a sword was found by him. Lying immediately over the forehead was found 3 large circular bosses or ornaments for a sword belt or buckler; they were composed of copper, and overlaid with a thick plate of silver. The copper is nearly reduced to an oxide or rust. The silver appeared quite black, but not corroded, and on rubbing, it became quite brilliant.—This mound must have been raised more than 600 years ago; for when the ground where it was situated was cleared, there were trees on it of 500 years growth, and the remains of others apparently as ancient, were found on the ground in every stage of decay. Here then is conclusive evidence that a people formerly inhabited the country who must have made considerable proficiency in the arts, with which the present natives were found totally unacquainted when Europeans first came among them What has become of this people?

Mr. Lorenzo Dow, the famous itinerant preacher, has once more arrived in this country.

A camp meeting, near Baltimore, was lately held, where 20,000 people were supposed to have been assembled—the exercises conducted with order and decorum.

The portage from the navigable waters of the Sandusky river, to those of the Scioto, is five miles, and many families now follow those waters in getting into the interior of our country.

A *detestable wretch*, of the name of *Abel Clapp*, had one Harvey Jessup confined in the New-York jail since October last, for the paltry sum of about 47 dollars. It seems that the mind and health of Jessup sunk under the pressure of this tyranny, and led him to the act of freeing himself from the grasp of his merciless creditor. On the inquest of the coroner held on the occasion, it appeared that the sheriff applied to Clapp for leave to have Jessup removed to the hospital at Bellevue, and that the application was made on account of the ill health of the prisoner, but the request was refused, and this probably occasioned the act of suicide that followed.

Of 27 banks in the state of Ohio, there are but six or seven that redeem their notes with specie.

Reduction of wages.—We have it from unquestionable authority, says the *Democratic Press*, of Philadelphia, that laborers are working on the turnpike for 12 1-2 cents per day, and that mowers have been hired for less than one half per day than they have had for seven years past.

A water melon has been raised this year by Capt. W Burt, of Springfield, Mass. weighing 84 pounds.

Expedition.—The ship *Nautilus* sailed from Boston late in October last, and her owners have already received information of her safe arrival in Columbia river. The advices were sent across the Rocky mountains, down the Missouri, thence by the lakes, &c.

Public lands.—It is computed that east of the Mississippi there are two hundred millions of acres still unsold belonging to the United States: most of it however still subject to the Indian title. On the west side of that river probably more than one thousand millions are to be found in our territory. The increase of our public revenue from the sales of public lands is nearly proportionate to our increase of population, but unfortunately the payments for the lands bear no proportion to the sales. On the 30th September, 1818, the amount due from purchasers of lands was about twelve and a half millions of dollars.

From New-Orleans it is stated that the band of pirates that has so long infested the lower parts of the Mississippi, and the adjacent lakes, have established themselves, to the number of fifty, on a piece of land between two bayous, which empty into lake Barataria, under the command of the noted Mitchel.

A cheat.—A man in Camden, a town in New-Jersey, opposite Philadelphia, advertised that on a certain day he would ascend in a balloon. This brought over about 25,000 people from that city. The balloon, however, did not ascend, for which some excuses were made. The ferriage of the spectators across the Delaware, and back again, amounted to about 2,500 dollars, of which it is said the balloon man had one half. This, we believe, is the same man that gave notice that he would navigate or steer his balloon any direction he pleased, while in the air, which no doubt many believed.

About the 20th ult. a prodigious torrent of rain fell at Norfolk, and the wind afterwards blowing violently from the northwest so obstructed the tide when setting up James' river, that the wharves of that city were covered several feet in depth with water.

The Tarantula.—In the National Intelligencer we observe, in an extract of a letter, the case of a daughter of a Mr. Courtney, in Illinois, who had been bitten in her forehead by a very poisonous species of the field spider, and who died in consequence of the bite. In one of the earlier numbers of the Medical Repository, published in New-York, the reader will find a remarkable case of a girl bitten by one of these insects, and of the strange effect that music had on her—effects indeed very similar to those recorded in ancient times as having been produced by the bite of the tarantula. It is well known that the juice of the leaf of the common plantane, (plantago) taken inwardly, and applied to the wound occasioned by the bite of a rattle snake, is an effectual cure for that sort of poison: and in the paper just mentioned, it is stated as a matter worthy of belief, that the juice of this herb, applied as just mentioned, will be found a cure for the bite of any poisonous animal, whether a reptile, an insect, or even a mad dog. It should also be mentioned in confirmation of this opinion, that there is an old story, often related, that the efficacy of the plantane in cases of poison was discovered in the following manner: An old black man happened to see a spider in combat with a toad; the toad frequently seemed to be worsted, retreated to a plant of the plantane growing near, of which it would eat some, and then return to renew the combat. The plantane was then pulled up, when the toad on returning, and finding none of it, soon swelled up and died. This spider, which is supposed to be the tarantula, is much larger and darker colored than the common field spider, and has its hole, or place of residence, near the ground, and under something that affords a shelter.

Cure for Consumption.—Dr. Davis, of South Carolina, a gentleman of eminence in his profession, has been completely successful in administering Prussic acid in cases of consumption. This acid is a poison if taken in considerable quantity. It is obtained by distillation from the matter with which the interior of wine casks are encrusted after the liquor is taken out.

A small expedition is fitting out in Boston to cruise in quest of the Sea Serpent.

Rouse's Point, where our government erected a fortification, is found to be a mile and a half within the British line

FOREIGN.

The Duke of Richmond, Governor of the Canadas, died in Upper Canada, on the 28th ult. at the age of about 55. His death said to be caused by a too powerful sun, while on fatiguing duty, the influence of which produced a fever that affected his brain. He is spoken of in terms of high respect, esteem and veneration in the papers published in those provinces. The last *Kingston Chronicle* appears in deep mourning for the loss of this able magistrate, and public benefactor.

At Montreal the heat has been up to 95 this summer. At Kingston, Upper Canada, it has not exceeded 83. The breeze from lake Ontario is the cause of this difference.

A man, in Montreal, lately, on a trifling wager, drank three pints of rum at once. He won the wager, but the rum quickly dispatched him.

In Montreal the following singular occurrence is mentioned. A fatted ox died very suddenly, and a Mr. Brown was employed to take off his skin, and take out the fat. In the latter operation he slightly wounded his hand on the sharp edge of a bone he had cleft asunder, in consequence of which he died in less than a week afterwards, apparently poisoned. His flesh mortified about the wounded part, and on his decease his countenance changed to a dead purple.

Late important news.—**A letter form St. Tho**mas, as late as the 4th inst. says "Barcelona has fallen, and Cumana, and the whole royal squadron, are now in possession of the Patriots, and probably before this reaches you, Laguira, Porto Cavello and Caraccas will also be subject to the rebels."

A letter lately received at Boston states, that the united Patriot forces under generals Marino, Saraza, and Bermudez, gained a victory over a body of the Royalists under general Arana, in the plains of Cumana, and that the city of Cumana was blockaded by British troops by land, and by admiral Brion's squadron by sea. From other sources of information it appears that the cause of the Patriots is promising, and must eventually prevail, unless the forces said to be sending out by the mother country should change the tide of affairs.

Information from Maracaibo, of the 26th ult. is received of the defeat of Morillo by the Patriots, at Columboso — loss of the Royalists very great—Patriots in good spirits.

General Long commands the Patriot forces assembling at Texas. He speaks with confidence of success. — The troops opposed to him are headed by the Spanish general Aradonda. In the mean time our government is pursuing steps to preserve the neutrality of this country.

President Boyer, of St. Domingo, has sent an envoy to France with proposals fo. a treaty by which the French colonists are ultimately to receive compensation for the estates they have lost there.

Admiral Cornwallis lately died in England.

It is stated that in the counties of Yorkshire, Cheshire and Lancashire, in England, upwards of 120,000 men are enrolled in the reform societies. This number is probably more than two thirds of all the males fit to bear arms in those counties. The principles assumed in the great Smithfield meeting (supposed to be 70,000) are those of Liberty and Equality of rights—that every man of mature age and sound mind has the right of suffrage in the choice of representatives—that laws made by those who are not chosen by the voice of the whole people, and agreeably to this principle, are not binding on those who have been excluded from any participation in the choice of representatives—of course any laws for imposing taxes on them (those to support the *national debt*, for instance!) by those who never were clothed with this rightful power of making such laws, are not binding, and ought to be disregarded. That meeting accordingly resolved that with a view to obtain representatives of the whole people "we will cause books to be opened in the different parishes of the metropolis (London) for the enrolment of the names and residence of every man of mature age and sound mind resident therein, so as to be enabled to give his vote when legally required so to do." In a previous resolution they declare that after the first day of January next they will not consider themselves bound by any future enactments of those styling themselves their representatives other than those who shall be chosen on the foregoing principles; and they finally resolve to petition the Prince Regent that writs of election may be issued agreeably thereto, in order that every man may have his voice in the choice of his rulers. It is believed that in England the object is pretty uniformly a reform of the government, without altering the general features of its form, and to get rid of the national debt.

Meeting at Manchester.—**This was held on the** 12th July last—Forty thousand people supposed to be present. The principles advocated similar to those of the London meeting at Smithfield. They however proceeded to elect *Sir Charles Wolsely* on the spot to represent the town of Manchester in Parliament, with instructions to demand his seat there. The election was by uplifted hands, but was said to be very unanimous. The town of Manchester contains about one hundred thousand inhabitants.

At Glasgow a meeting of the weavers lately took place—the crowd was supposed to be 35,000. They proposed to petition government to defray the expense of their emigration to the British colonies in this country. At Leeds, and other parts of England, there are strong indications of insurrection. Numerous meetings are held—the cap of liberty raised, &c.

The British government have consented that our ships may take from British ports a passenger for every five tons burthen, beside the cargo of the vessel.

The bill for preventing English subjects from enlisting in the service of foreign nations has become a law of England.

A London paper says the leaves of the whortleberry, carefully dried, are a good substitute for tea.

A diamond, of a very fine specimen, has lately been found in Ireland, the first perhaps ever found in that country.

The question on Sir F. Burdett's late motion for reform in Parliament was lost by a majority of 95 against the motion.

The celebrated London Museum has lately been sold under the hammer. The articles comprising it were more than 20 years in collecting. The Library of Blenheim house has been, and that of the queen of England is also to be, disposed of in like manner.

Provision has lately been made in England for making a canal of about six and a half miles, from the Liverpool canal to that of the duke of Bridgewater's when an inland navigation from Liverpool to Manchester, and thence to London, will be completed. It also completes the inland navigation to all the large commercial and manufacturing towns in that country, as well as to their principal mines of iron ore, salt and coal, and to the great pottery establishments in Shropshire.

Trop bucoup d'un bon chose.—**From the preva**lent freedom of remark in the French Journals, it would seem that the government of France begins to fear it has given its subjects too much of a good thing in the law for establishing the liberty of the press, and, as would seem, manifests a wish to have a suspension of the law for two years.

M. Vielian has laid before the French government a new plan of telegraphic dispatches, by which 3,000 of them may be sent to every part of the kingdom in a day, and receive answers He proposes that merchants should also be enabled to partake in the benefits of this rapid communication.

At Cadiz great preparations are making for the expedition against the Patriots. Information had just reached that place that great indignation was manifested at Havanna on account of a report there that the island of Cuba was to be transferred to Great-Britain.

It appears that the navy of Spain is almost annihilated, and that the navy yards there do not contain timber enough to build four ships of the line. The island of Cuba has however sufficient of timber for affording a new supply, but in the present war the government is unable to procure it from thence, owing to the Patriot privateers intercepting its transportation.

From Spain, report says, the troops raised for South-America say they prefer staying where they are, and it is conjectured they would prefer marching to Madrid!

A letter from Gibraltar, to Mr. Topliff, of Boston, says "every thing is quiet at Cadiz. The expedition for South America is abandoned." Doubtful.

By the last cccounts from Germany, it appears that *Sandt*, the assas-in of Kotzebue, was still alive, but was not expected long to survive—that such are the feelings of the young men there that government would not dare attempt the execution of Sandt—that Kotzebue was employed by the emperor of Russia, as a *spy* on his own country, and for this had a yearly allowance of 40,000 roubles from his employer.

At Riga, during a northwest wind, an immense quantity of young caterpillars fell upon the great meadows on the south bank of the Duna and devoured the grass, with the roots, upon a very extensive tract. The people dug ditches, and used every means for distroying them, and arresting their progress, without much effect; but on the fourth day they crept into the ground, and changed into chrysalises, from which they will probably soon derive a plentiful supply of butterflies.

From an authentic source it appears that "the sovereigns united at the Congress of Aix-la-Chapel have resolved seriously to call upon the Barbary states to renounce the system of piracy which they have hitherto followed, and to adopt the principles received in Europe." England and France are to have this affair adjusted with those states.

Mr. Henderstrom has discovered, in New-Siberia, the claws of a bird which were each a yard in length.—Quills of the same bird had also been found large enough to admit a man's arm. In New-Holland mention is made, in Cook's voyages, of the nest of a bird which was built on the ground, and was upwards of two feet in height, and 26 feet in circumference.

New-Holland.—**The British have sent a com**missioner to examine the condition of their colony at Botany Bay, in that island. Many of their convicts sent there are said to have become respectable, and in good circumstances. The soil of the country is productive, and the climate pleasant. The island is sufficient in extent to form a great empire, and probably will become such in three or four centuries. It is said that larcenies have been committed in Britain for the sole purpose of getting a passage to Botany Bay free of expense.

By recent advices it appears, that the king of Morocco, attended by his son and principal bashaws, at the head of an army of 56,000 men, lately undertook to chastise a numerous tribe of the Arabs, but was defeated in a decisive battle, in which he lost 20,000 killed and wounded. The Arabs, it seems, desperately charged with bayonets, and fought valiantly. The prisoners taken by them were plundered, but their lives were spared. The king, it seems, put himself under the protection of the shieks (chiefs) of the Arabs, who allowed him to return to his own dominions.

ALBANY AGRICULTURAL SOCIETY.

The agricultural society of the county of Albany, was re-organized on Wednesday, when the following officers and committees were chosen, viz:

Stephen Van Rensselaer, president.
Ambrose Spencer, first vice-president.
Moses Smith, 2d. do.
John W. Yates, treasurer.
Teunis Van Vechten, secretary.

Executive Committee—Solomon Van Rensselaer, Jesse Buel, John Schuyler, jun. Abel French and John Townsend.

Viewing Committee—Apollos Moore, Julius Bartlet, Corneilus H. Waldron, Malachi Whipple, James Sacket, Jacob C. Ten Eyck, William N. Sill, Abraham G. Lansing, Douw Fonda.

Agricultural Committee—Jacob Ten Eyck, John V. A. Lansing, John A. Burhans.

Committee on Manufactures.—John Van Schaick, William James, Benjamin Knower.

Committee for viewing Animals.—William M'Kown, Christopher Dunn, Matthew Bullock, Thomas Hillhouse, Asa Colvard.

Town Committees.—Watervliet, Robert Dunbar, jun. Michael Freligh; Guilderland, William M'Kown, David Bogardus; Bern, Johan Jost Deitz, John Gallup; Rensselaerville, Jonathan Jenkins, Jonathan Crocker, jun; Westerlo, Gerard Reynolds, John Gibbons; Coeymans, Archibald Stephens, John Beekman, jun; Bethlehem, David De Long, Annanias Platt.

The fair will be held in this city on the 12th and 13th days of October next, and an address will be delivered at the meeting of the society, by the president.—*Daily Advertiser.*

CATTLE SHOWS AND FAIRS.

The approaching Agricultural Fairs and Anniversary Meetings, in the under mentioned Counties, will be held at the times and places following, viz.

In Berkshire, Mass. at Pittsfield, 5th and 6th October.
In Otsego, at Cooperstown, same time.
In Albany, at the city of Albany, 12th and 13th.
In Rensselaer, at the city of Troy, same time.
In Madison, at Morris's Flatts, 13th and 14th.
In Clinton, on the 14th.
In Jefferson, on the 29th and 30th September
In Queens, on the first November.

If the presidents or secretaries of the other societies throughout the state, would inform the printers in their several counties, of the days appointed for their fairs and anniversary meetings, information so important to farmers, butchers, drovers and other citizens, would be more generally disseminated, and the purchase and barter of domestic manufactures, thereby greatly extended.—*Ibid.*

JOHN ERSKINE LOVETT, Attorney at Law, has removed to No. 93, Pearl-street, two doors north of Messrs. Websters & Skinners' Book-store.
Albany, June 17, 1819.

JONAS HARRISON,
ATTORNEY at Law, one door north of the Court-House, Buffalo, N. Y.

ENGRAVING
And Copperplate Printing.

THE Subscribers have removed to No. 55, STATE-STREET, a few doors below their old stand, where they continue the above business in its various branches. From the experience they have had in bank note and other engraving, they are enabled to solicit the patronage of their friends and the public, with a full belief, that all orders in their line will be executed to the satisfaction of those who may employ them.
RAWDON & BALCH.
Albany, August 1, 1819.

PROPOSALS,

For carrying the Mail on the following routes will be received at the General Post Office, until Saturday, the 2d of October next.

1. From Peekskill by Crum Pond to Somerstown, once a week, 14 miles.

Leave Peekskill every Tuesday at 6 *a m* and arrive at Somerstown by 9 *a m*.

Leave Somerstown at 10 *a m* and arrive at Peekskill by 5 *p m*.

2. From Pine Plains to North Amenia, 8 miles.

Leave Pine Plains every Tuesday at 6 *a m* and arrive at North Amenia by 8 *a m*.

Leave North Amenia at 10 *a m* and arrive at Pine Plains by noon.

3. From Great Bend, Pa. by Harmony and Windsor to Deposit, once a week, 26 miles.

Leave Deposit every Saturday at 6 *a m* and arrive at Great Bend by 2 *p m*.

Leave Great Bend every Friday at 10 *a m* and arrive at Deposit by 6 *p m*.

4. From Albany by Spencertown to Sheffield, Ms. 43 miles.

Leave Albany every Wednesday at 6 *a m* and arrive at Sheffield by 6 *p m*.

Leave Sheffield every Thursday at 6 *a m* and arrive at Albany by 6 *p m*.

5. From Troy by Brunswick, Grafton and Petersburgh to Williamstown, Ms. once a week, 28 1-2.

Leave Troy every Monday at 10 *a m* and arrive at Williamstown by 6 *p m*.

Leave Williamstown every Tuesday at 6 *a m* and arrive at Troy by 2 *p m*.

6. From Schenectady to Utica on the south side of Mohawk River, once a week, 76 miles.

Leave Schenectady every Tuesday at 6 *a m* and arrive at Utica on Wednesday by 6 *p m*.

Leave Utica every Thursday at 6 *a m* and arrive at Schenectady on Friday by 6 *p m*.

7. From Cherry Valley by Long Patent, Westford and Decatur to Worcester, once a week, 21 miles.

Leave Cherry Valley every Tuesday at 5 *a m* and arrive at Worcester by 11 *a m*.

Leave Worcester at 1 *p m* and arrive at Cherry Valley by 7 *pm*.

8. From Cambridge by Hoosick, Petersburgh, Berlin and Stephentown to Lebanon, once a week.

Leave Cambridge every

Leave Lebanon every

9. From Waterford by Orange & Jone's to Ballston Spa, once a week, 20 miles.

Leave Waterford every Tuesday at 6 *a m* and arrive at Ballston Spa by 11 *a m*.

Leave Ballston Spa at 2 *p m* and arrive at Waterford by 7 *p m*.

10. From Waterloo by Clyde Village to Port Glasgow, once a week.

Leave Waterloo every Friday at 6 *a m* and arrive at Port Glasgow by 6 *p m*.

Leave Port Glasgow every Saturday at 6 *a m* and arrive at Waterloo by 6 *p m*.

11. From South Nunda by M'Clure's to Ellicottsville in Cattaragus county.

Leave South Nunda every Friday at 6 *a m* and arrive at Ellicottsville by 6 *p m*.

Leave Ellicottsville every Saturday at 6 *a m* and arrive at South Nunda by 6 *p m*.

NOTES.

1. The Post-master General may expedite the mails and alter the times for arrival and departure at any time during the continuance of the contract, he stipulating an adequate compensation for any extra expense that may be occasioned thereby.

2. Fifteen minutes shall be allowed for opening and closing the mail at all offices where no particular time is specified.

3. For every thirty minutes delay (unavoidable accidents excepted) in arriving after the times prescribed in the contract, the contractor shall forfeit one dollar; and if the delay continue until the departure of any depending mail, whereby the mails destined for such depending mail lose a trip, a forfeiture of double the amount allowed for carrying the mail one trip shall be incurred, unless it shall be made to appear that the delay was occasioned by unavoidable accident; in which case the amount of pay for the trip, will, in all cases, be forfeited and retained.

4. Persons making proposals are desired to state their prices by the year. Those who contract will receive their pay quarterly—in the months of May, August, November, and February, one month after the expiration of each quarter.

5. No other than a free white person shall be employed to convey the mail.

6. Where the proposer intends to convey the mail in the body of a stage carriage, he is requested to state it in his proposals.

7. The Post-master General reserves to himself the right of declaring any contract at an end whenever one failure happens, which amounts to the loss of a trip.

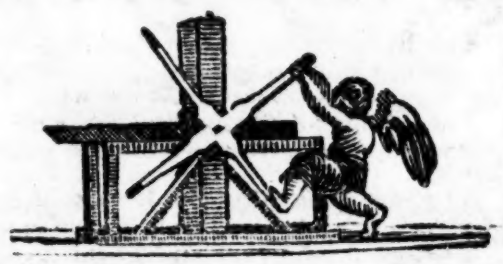
9. The distance stated are such as have been communicated to this office, and some of them are doubtless incorrect; on this subject the contractor must inform himself; no alteration will be made in the pay on account of any error in this respect.

9. The contracts are to be in operation on the first day of January next; and to end December 31, 1820.

RETURN J. MEIGS, Jr. *Post-master General.*

General Post Office, Washington City, May 26, 1819.

ENGRAVING,



And Copperplate Printing.

THE Subscriber continues the engraving and Copperplate printing, in its various bsanches, at No. 82, State-street. Having for several years printed the bills of the principal banks in this state, whose patronage he continues to receive, from a conviction that, by his care of their plates, he yields them two thousand impressions more than they formerly received, he can offer no better recommendation to the public for the faithful execution of all printing in his line, that they may please to favour him with.

L. LEMET.

Albany, July 17, 1819.

$40,000.

By authority of Congress.

NATIONAL LOTTERY.

SECOND CLASS.

SCHEME.

100	Prizes of D.	1,000	is	D. 100,000
1	Prize of	40,000		40,000
2	do.	10,000		20,000
4	do.	5,000		20,000
20	do.	500		10,000
60	do.	100		6,000
2,600	do.	40		104,000
				D. 300,000
10,000	Tickets, at 30 dolls.			300,000

PRIZES ALL FLOATING.

First 1,000 Blanks entitled to 40 dollars each.

2	Prizes of	5,000	floating from	1st day's drawing.
1	do.	5,000	do	5th do.
1	do.	5,000	do.	7th do.
1	do:	10,000	do.	10th do.
1	do.	10,000	do.	16th do.
1	do.	40,000	do.	19th do.

The drawing of 500 Tickets is called a day's drawing, and will regulate that of the above prizes.

The drawing will commence at the city of Washington, in the month of October next, positively, unless the sale of Tickets will allow it to be done *sooner*.

Cash will be promptly advanced for prizes, at either of D. GILLESPIE'S United States Lottery Office, No. 114 Broadway, opposite the City Hotel, New-York; No. 11 South Third, between Chesnut and Market-streets, Philadelphia; and Pennsylvania Avenue, City of Washington.

This splendid Lottery being under the authority of the United States, and the prizes all floating as specified, offers the greatest inducements to venders and adventurers. As the tickets can be sold in any part of the United States, orders (post paid) forwarded to the subscriber at either of the above offices, from venders, associates, or individuals, for Tickets or chances, will receive thankful attention, from

D. GILLESPIE.

*** Present retail price of Tickets, 32 dollars.

Sale of Land for Taxes.

State of New-York—Comptroller's Office.

PUBLIC Notice is hereby given, that lists of certain lands liable to be sold for taxes, have been forwarded to the several counties in this state, in order to be deposited in the several county treasurers' and town clerks' offices, respectively, for the information of all persons concerned: and that the said lists may be examined at either of the said offices, at all reasonable hours: And notice is hereby also given, that on *Thursday, the seventh day of October next*, at ten o'clock in the forenoon, at the capitol, in the city of Albany, and on the next succeeding days, I will sell at public auction to the highest bidder, so much of each lot, piece or parcel of land mentioned and described in the said lists, as will be necessary to pay all taxes, interest and charges now due, or that may grow and may be due thereon at the time of sale.

The conditions of sale will be, that the purchasers within forty-eight hours after the sale, pay the purchase moneys and receive certificates of their purchases; and that after the expiration of two years from the date of their certificates, they receive conveyances for the lands purchased by them respectively, unless the owners, or those claiming to be such, of the lands so purchased, shall, previous to the expiration of the said two years, pay to the comptroller, for the use of the said purchasers, their heirs and assigns, the amount of the purchase moneys, with interest, at the rate of twenty per centum per annum.—The lands sold to be subject to all claims of the state thereon. And in case any land to be purchased at the said sale and that may be conveyed in pursuance thereof, shall at the time of conveyance be in the actual possession and occupancy of any person or persons, the title of the purchaser shall then and in that case be subject to the stipulations and provisions of the fifth section of the act, entitled "an act to repeal in part the act, entitled "an act providing more effectually to ascertain and determine the true value of real estates within this state, and for other purposes," and further to amend the act for the assessment and collection of taxes" passed April 13, 1819.

ARCH'D. M'INTYRE, Comptrolle

Albany, May 27th, 1819

☞ Persons who may have made payments into the treasury for taxes, and omitted to have their receipts presented at the comptroller's office to have them entered and countersigned as required by law, are advised to present them in order to be so entered and countersigned before the day of sale; or that in case of failing to do so, their lands will be sold, and they thereafter be deprived of the benefit of all such payments.

Payments for taxes cannot be received on the days of sale, nor for two days prior to the sale.

AN APPRENTICE WANTED.

A SMART, active lad, about 13 or 14 years of age, wanted as an apprentice to the Watch Making business. None need apply unless well recommended, and one from the country would be preferred. Enquire at No. 437, South Market-street, of ALEXANDER M'HARG.

Albany, July 2, 1819.

PHYSIOGNOTRACE.

LIKENESSES ENGRAVED.

L. LEMET,

RESPECFULLY informs the ladies and gentlemen of Albany, that he takes likenesses in Crayon as large as life, and engraves them of a reduced size in a new and elegant style. The price of the large likenesses, with an engraved plate and twelve impressions, is 25 dollars for gentlemen, and 35 dollars for ladies, or 8 dollars for the drawing only.

For further particulars apply at his house, No. 82 State-street, where a great number of portraits of distinguished characters may be seen.

June 5, 1819.

EAGLE AIR FURNACE.

ORDERS for this Furnace may be left at THOMAS GOULD's, No. 65, State-street, or at the Furnace, No 84, Beaver-street, where strict attention is paid by one of the proprietors; who has

CONSTANTLY ON HAND,

Potash Kettles, from 18 to 55 dollars; Bark Mills, of late improvement; large and small Caldrons; Oven and Close Stoves, and Castings in general.

PATTERNS.

This Furnace is furnished with a general assortment of Patterns, among which are Patterns of latest improvement for Merchant and Country Mills, Cotton and Carding Machinery, &c. Patterns of any description furnished on the shortest notice.

Warner Daniels and Co.

N. B. A constant supply of LIVERPOOL and VIRGINIA COAL, for family and smith's use.

Albaay, June 5, 1819.

ALBANY: PRINTED FOR THE EDITOR,

BY JOHN O. COLE.

☞ COMMUNICATIONS, SUBSCRIPTIONS, and ADVERTISEMENTS, for this paper, and PRINTING JOBS, of every description, which will be neatly executed, at fair prices, received at the Post Office. All letters from abroad, directed to the Postmaster, Albany, will be duly attended to.

TERMS.

THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.